

$$1. \bullet 6^2 = |CD| \cdot (|CD| + 9)$$

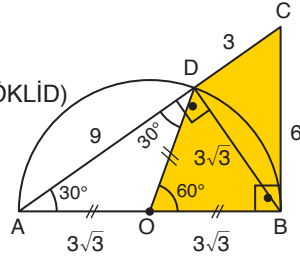
$$|CD| = 3$$

$$\bullet |DB|^2 = |CD| \cdot |DA| \quad (\text{ÖKLİD})$$

$$|DB|^2 = 3 \cdot 9$$

$$\sqrt{|DB|^2} = \sqrt{27}$$

$$|DB| = 3\sqrt{3}$$



$$\bullet \text{Taralı Alan} = A(\widehat{ODB}) + A(\widehat{BDC})$$

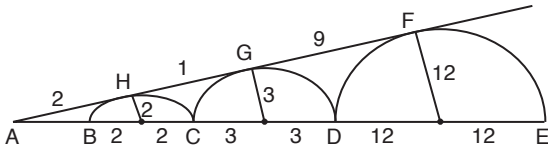
$$= \frac{(3\sqrt{3})^2 \sqrt{3}}{4} + \frac{(3\sqrt{3}) \cdot 3}{2}$$

$$= \frac{27\sqrt{3}}{4} + \frac{9\sqrt{3}}{2}$$

$$= \frac{45\sqrt{3}}{4}$$

Cevap: E

2.



$$\bullet \frac{|AH|}{|AG|} = \frac{2}{3} \Rightarrow |AH| = 2 \text{ ve } |HG| = 1 \text{ diyelim}$$

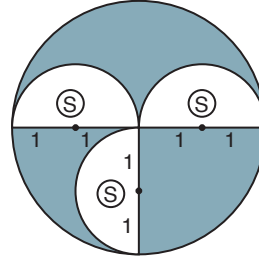
$$\bullet \frac{|AH|}{|AF|} = \frac{2}{12} \Rightarrow |AH| = 2 \text{ ve } |HG| = 1 \text{ olduğundan}$$

$$|GF| = 9 \text{ diyelim.}$$

$$\bullet \frac{|AH|}{|GF|} = \frac{2}{9} \text{ olur.}$$

Cevap: C

3.



Yarım dairelerin herbirinin yarıçapı 1 br ve büyük dairenin yarıçapı 2 br olsun.

Boyalı Alan = Büyük Dairenin Alanı - Boyalı Olmayan Alan

$$= 4\pi - \frac{3 \cdot \pi}{2} = \frac{5\pi}{2}$$

$$\frac{5\pi}{2} = \frac{5\pi}{8}$$

Cevap: C

4.

İlk durumda dairenin alanı = πr^2

Son durumda dairenin alanı = $\pi(r+4)^2$

$$\pi(r+4)^2 - \pi r^2 = 40\pi$$

$$(r+4)^2 - r^2 = 40$$

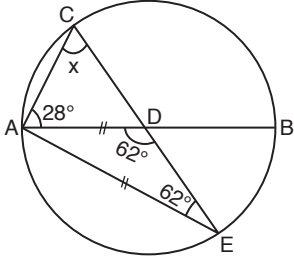
$$(r+4+r) \cdot (r+4-r) = 40$$

$$2r+4 = 10$$

$$r = 3$$

Cevap: A

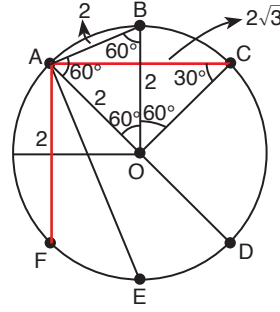
5.



$$\begin{aligned} m(\widehat{AC}) &= 2 \cdot 28 = 56 \\ m(\widehat{BC}) &= 180 - 56 = 124 \\ m(\widehat{CAD}) &= \frac{56}{2} = 28 \\ x + 28 &= 62 \Rightarrow x = 34 \end{aligned}$$

Cevap: B

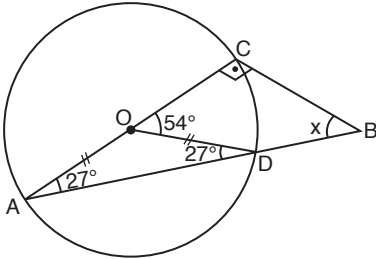
7.



$$\begin{aligned} |AB| &= |AF| = 2 \\ |AC| &= |AE| = 2\sqrt{3} \\ |AD| &= 4 \\ 2 \cdot 2 + 2 \cdot 2\sqrt{3} + 4 &= 8 + 4\sqrt{3} \end{aligned}$$

Cevap: E

6.



C teğet noktası olduğundan $m(\widehat{ACB}) = 90^\circ$ dir.

$|AO| = |OD|$ olduğundan

$m(\widehat{ODA}) = m(\widehat{OAD}) = 27^\circ$ dir.

ABC üçgeninde iç açılar toplamından;

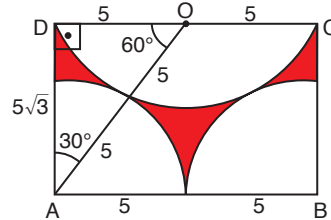
$$27 + 90 + x = 180$$

$$117 + x = 180$$

$$x = 63$$

Cevap: D

8.



AOD üçgeni, kenarların oranlarından dolayı $30^\circ - 60^\circ - 90^\circ$ üçgenidir.

Taralı Alan = Dikdörtgenin Alanı – Dairelerin Alanları Toplamı
bir tam dairenin alanına eşit

$$= 5\sqrt{3} \cdot 10 - \pi \cdot 5^2$$

$$= 50\sqrt{3} - 25\pi$$

$$= 25(2\sqrt{3} - \pi)$$

Cevap: C

9.



$$|AO| = |OB|$$

$$2x + y = y + 8$$

$$x = 4$$

$$\text{O merkezli yarım dairenin alanı} \quad \frac{\pi \cdot (2x + y)^2}{2}$$

$$\text{K merkezli yarım dairenin alanı} \quad \frac{\pi \cdot (x + y)^2}{2}$$

$$\text{Taralı Alan} = \frac{\pi \cdot (2x + y)^2}{2} - \frac{\pi \cdot (x + y)^2}{2}$$

$$48\pi = \frac{\pi}{2} \cdot (2x + y + x + y) \cdot (2x + y - x - y)$$

$$48 = \frac{1}{2} \cdot (3x + 2y) \cdot x$$

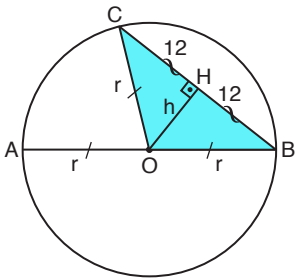
$$\frac{24}{48} = \frac{1}{2} \cdot (12 + 2y) \cdot \frac{1}{2}$$

$$24 = 12 + 2y$$

$$y = 6$$

$$x + y = 4 + 6 = 10$$

10.



$$\text{Alan}(\widehat{COB}) = 60$$

$$\frac{24 \cdot h}{2} = 60$$

$$h = 5$$

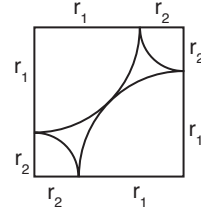
OHB üçgeni 5 – 12 – 13 üçgenidir. O halde $r = 13$ olur.

$$\text{Çemberin Çevresi} = 2\pi r = 2\pi \cdot 13 = 26\pi$$

Cevap: A

Cevap: E

11.



$$4(r_1 + r_2) = 52$$

$$r_1 + r_2 = 13$$

Karşılıklı çemberlerin çevreleri eşit ve iki çeyrek çember bir yarım çembere eşit olduğundan;

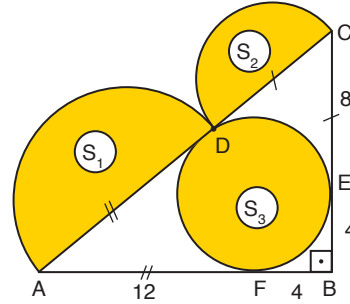
$$\text{Parçanın Çevresi} = \frac{2\pi r_1}{2} + \frac{2\pi r_2}{2}$$

$$= \pi(r_1 + r_2)$$

$$= 13\pi$$

Cevap: E

12.



$$|CD| = |CE| = 8 \text{ birim}$$

$$|AD| = |AF| = 12 \text{ birim}$$

$$|AC| = 8 + 12 = 20 \text{ birim}$$

ABC üçgeni 12 – 16 – 20 üçgeni

$$|FB| = |EB| = 4 \text{ birim}$$

$$S_1 = \frac{\pi \cdot 6^2}{2} = 18\pi$$

$$S_2 = \frac{\pi \cdot 4^2}{2} = 8\pi$$

$$+ S_3 = \pi \cdot 4^2 = 16\pi$$

$$S_1 + S_2 + S_3 = 42\pi$$

Cevap: E